

Application Serial No.: 10/081,347
Amendment dated: April 7, 2006
Response to Office Action dated March 15, 2005

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Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) An isolated polynucleotide molecule encoding a fibroblast growth factor (FGF) homolog comprising a polynucleotide sequence that encodes for a polypeptide that is at least 80% identical to the amino acid sequence as shown in SEQ ID NO: 2 from amino acid residue 55 (Tyr) to amino acid residue 175 (Met) wherein the polypeptide encoded by said polynucleotide stimulates proliferation of cells derived from mesenchymal stem cells or their precursors.

2. (Original) The isolated polynucleotide molecule of claim 1, wherein said polynucleotide sequence encodes for a polypeptide that is at least 80% identical to the amino acid sequence as shown in SEQ ID NO: 2 from residue 55 (Tyr) to residue 196 (Lys).

3. (Original) The isolated polynucleotide molecule of claim 1, wherein said polynucleotide sequence encodes for a polypeptide that is at least 80% identical to the amino acid sequence as shown in SEQ ID NO: 2 from residue 55 (Tyr) to residue 207 (Ala).

4. (Currently amended) An isolated polynucleotide molecule encoding a fibroblast growth factor (FGF) homolog comprising a polynucleotide sequence that encodes for a polypeptide that is at least 80% identical to the amino acid sequence as shown in SEQ ID NO: 2 from amino acid residue 28 (Glu) to 175 (Met) wherein the polypeptide encoded by said polynucleotide stimulates proliferation of cells derived from mesenchymal stem cells or their precursors.

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5. (Previously presented) The isolated polynucleotide molecule of claim 4, wherein said polypeptide encoded by said polynucleotide is at least 90% identical to the amino acid sequence as shown in SEQ ID NO: 2 from amino acid residue 28 (Glu) to residue 175 (Met).

6. (Previously presented) The isolated polynucleotide molecule of claim 4, wherein said polypeptide encoded by said polynucleotide is at least 95% identical to the amino acid sequence as shown in SEQ ID NO: 2 from amino acid residue 28 (Glu) to residue 175 (Met).

7. (Currently amended) An isolated polynucleotide molecule encoding an FGF homolog comprising a polynucleotide sequence that encodes a polypeptide that is at least 80% identical to the amino acid sequence as shown in SEQ ID NO: 2 from amino acid residue 28 (Glu) to residue 196 (Lys) wherein the polypeptide encoded by said polynucleotide stimulates proliferation of cells derived from mesenchymal stem cells or their precursors.

8. (Previously presented) The isolated polynucleotide molecule of claim 7, wherein said polypeptide encoded by said polynucleotide is at least 90% identical to the amino acid sequence as shown in SEQ ID NO: 2 from amino acid residue 28 (Glu) to residue 196 (Lys).

9. (Previously presented) The isolated polynucleotide molecule of claim 7, wherein said polypeptide encoded by said polynucleotide is at least 95% identical to the amino acid sequence as shown in SEQ ID NO: 2 from amino acid residue 28 (Glu) to residue 196 (Lys).

10. (Currently amended) An isolated polynucleotide molecule encoding an FGF homolog comprising a polynucleotide sequence that encodes a polypeptide that is at least 80% identical to the amino acid sequence as shown in SEQ ID

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NO: 2 from amino acid residue 28 (Glu) to residue 207 (Ala) wherein the polypeptide encoded by said polynucleotide stimulates proliferation of cells derived from mesenchymal stem cells or their precursors.

11. (Previously presented) The isolated polynucleotide molecule of claim 10, wherein said polypeptide encoded by said polynucleotide is at least 90% identical to the amino acid sequence as shown in SEQ ID NO: 2 from amino acid residue 28 (Glu) to residue 207 (Ala).

12. (Previously presented) The isolated polynucleotide molecule of claim 10, wherein said polypeptide encoded by said polynucleotide is at least 95% identical to the amino acid sequence as shown in SEQ ID NO: 2 from amino acid residue 28 (Glu) to residue 207 (Ala).

13. (Currently amended) An isolated polynucleotide molecule encoding an FGF homolog comprising a nucleotide sequence as shown in SEQ ID NO: 1 from nucleotide 163 to nucleotide 525 or as shown in SEQ ID NO: 6 from nucleotide 163 to nucleotide 525 wherein the polypeptide encoded by said polynucleotide stimulates proliferation of cells derived from mesenchymal stem cells or their precursors.

14. (Original) The isolated polynucleotide of claim 13, wherein said polynucleotide comprises a polynucleotide sequence as shown in SEQ ID NO: 1 from nucleotide 82 to nucleotide 525 or as shown in SEQ ID NO: 6 from nucleotide 82 to nucleotide 525.

15. (Original) The isolated polynucleotide of claim 13, wherein said polynucleotide comprises a polynucleotide sequence as shown in SEQ ID NO: 1 from nucleotide 82 to nucleotide 588 or as shown in SEQ ID NO: 6 from nucleotide 82 to nucleotide 588.

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16. (Currently amended) An expression vector comprising the following operably linked elements:

a transcription promoter;

a DNA segment selected from the group consisting of:

(a) an isolated polynucleotide molecule encoding an FGF homolog comprising a polynucleotide sequence as shown in SEQ ID NO: 1 from nucleotide 163 to nucleotide 525 or as shown in SEQ ID NO: 6 from nucleotide 163 to nucleotide 525;

(b) an isolated polynucleotide molecule encoding an FGF homolog comprising a polynucleotide sequence as shown in SEQ ID NO: 1 from nucleotide 82 to nucleotide 525 or as shown in SEQ ID NO: 6 from nucleotide 82 to nucleotide 525;

(c) an isolated polynucleotide molecule encoding a fibroblast growth factor (FGF) homolog comprising a polynucleotide sequence that encodes for a polypeptide that is at least 80% identical to the amino acid sequence as shown in SEQ ID NO: 2 from amino acid residue 55 (Tyr) to amino acid residue 175 (Met); and

(d) an isolated polynucleotide molecule encoding a fibroblast growth factor (FGF) homolog comprising a polynucleotide sequence that encodes for a polypeptide that is at least 80% identical to the amino acid sequence as shown in SEQ ID NO: 2 from amino acid residue 28 (Glu) to 175 (Met)

wherein the polypeptide encoded by said polynucleotide stimulates proliferation of cells derived from mesenchymal stem cells or their precursors; and

a transcription terminator.

17. (Original) A cultured cell into which has been introduced an expression vector according to claim 16, wherein said cell expresses a polypeptide encoded by the DNA segment.

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18. (Original) A method of producing an FGF homolog polypeptide comprising:

culturing a cell into which has been introduced an expression vector according to claim 16, whereby said cell expresses an FGF homolog polypeptide encoded by the DNA segment; and

recovering the FGF homolog polypeptide.

19. – 39. (Cancelled)